

Frequency and destination of live exports of breeding-stock pigs from the United States

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Key Points:

- Livestock exporting creates a network between countries with different health profiles
- To better understand the network created by U.S. exports, export data was analyzed to characterize country connections
- Exportation of breeding stock appears to represent a low risk of disease transmission into the U.S.

On the topic of investigating the risk and ways pathogens can enter countries, livestock exporting establishes a network between countries with different health profiles. In such scenarios, questions regarding potential risk of importing diseases from contaminated fomites returning to the country of origin might arise. Here, we characterize the frequency and origin of live-exports of breeding-stock pigs from the United States (U.S.) to other countries to illustrate how often and relevant are export trades with countries during ongoing transmission of OIE (World Organization for Animal Health) notifiable diseases such as ASF.

Data was obtained from USDA official records (1) and absolute and relative frequency of live exports of breeding-stock pigs from the US were described yearly according to country/region of destination. The U.S. exported a total of 382,118 heads to 62 different countries during 2003-2018, with an average of 23,882 heads exported per year (Figure 1). Asian countries accounted for 54.0% of all exports during the period, followed by Mexico (31.3%), South American countries (5.7%), Canada (4.9%), Central American countries (1.5%), Caribbean countries (1.3%), and European countries (1.3%) (Figure 2). Among Asian countries, the U.S. exported breeding hogs to China (41.5%), Hong Kong (25.2%), South Korea (18.1%), Russia (4.6%), Japan (3.9%), Vietnam (3.2%), Philippines (2.3%), and to Singapore, Israel, Indonesia, India, Thailand and Malaysia (1.3% combined).

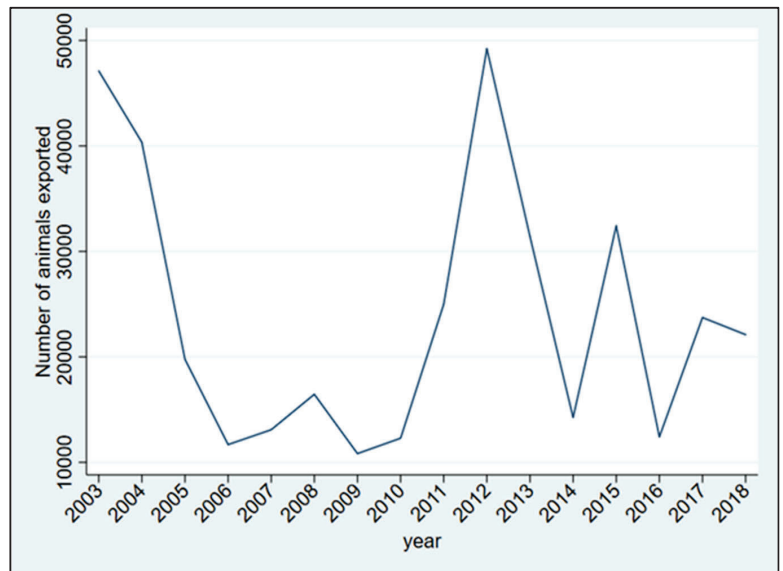


Figure 1. Total annual U.S. breeding pig exports between 2003 and 2018.

Exports to South America were to Brazil (37.8%), Guatemala (18.1%), Venezuela (14.2%), Ecuador (11.9%), Colombia (9.4%), Peru (4.2%), Chile (4.0%), and Guyana (0.6%). In 2019, a total of 7,219 breeding pigs were exported from the U.S. from January to July, most of which were exported to Mexico (80%), followed by Canada (6%), South and Central American countries (6.5% and 3%, respectively), Asian countries (1.4%), European countries (1.2%), and Caribbean countries (0.9%).

The US plays an important role when it comes to exporting breeding-stock as it serves as the port of exit for pigs from different breeding-stock companies based in the US and Canada. Exports to countries with ongoing transmission of ASF occurred to Russia and to China. According to the World Animal Health Information Database (2), ASF was present at some level in Russia during 2007-2018. However, exports to Russia during that period represented only 2.5% of all exports and there were no more exports since 2014. More recently, China has been listed as a country with an ongoing ASF outbreak on the African Swine Fever situation report from December-2018-January-2019 (3). Overall 22.4% of all US exports during 2003-2018 were to China, of which 5.5% occurred in 2018. However, export procedures seem to represent low risk as potential contaminated fomites related to these exports do not return to the US. A full report on U.S. swine breeding-stock trade with a review of current regulations is available at: <https://www.swinehealth.org/wp-content/uploads/2019/06/SHIC-18-193-Breeding-Stock-Final-Report.pdf>.

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